

**WHAT IS CLAIMED IS:**

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1 1. A method for inserting a second compressed video stream into a first  
2 compressed video stream, the method comprising:  
3 receiving the first compressed video stream;  
4 determining a profile for the first compressed video stream;  
5 encoding a second video in accordance with a particular encoding scheme  
6 and further with a profile similar to the profile of the first compressed video stream to  
7 generate the second compressed video stream;  
8 controlling the encoding of the second video based at least in part on the  
9 profile of the first compressed video stream; and  
10 inserting the second compressed video stream into the first compressed  
11 video stream.

1 2. The method of claim 1, further comprising:  
2 determining the profile for the second compressed video stream.

1 3. The method of claim 1, wherein the encoding of the second video is  
2 controlled such that a profile for the second compressed video stream is similar to the  
3 profile for the first compressed video stream at approximately a point in time when the  
4 second compressed video stream is inserted into the first compressed video stream.

1 4. The method of claim 3, wherein the encoding of the second video is  
2 further controlled such that the profile for the second compressed video stream is similar  
3 to the profile for the first compressed video stream at approximately a point in time when  
4 the first compressed video stream is inserted back into the second compressed video  
5 stream.

1 5. The method of claim 1, wherein the inserting includes  
2 initially multiplexing the first compressed video stream as an output video  
3 stream;  
4 multiplexing the second compressed video stream as the output video  
5 stream at a point in time when the inserting is to be achieved; and

6 splicing the second compressed video stream to the first compressed video  
7 stream.

1 6. The method of claim 5, further comprising:  
2 pausing the first compressed video stream for the time during which the  
3 second compressed video stream is multiplexed as the output video stream

1 7. The method of claim 1, further comprising:  
2 receiving a second control signal indicative of a second time period within  
3 which the inserting is to be performed; and  
4 initiating the encoding of the second video in response to receiving the  
5 second control signal.

1 8. The method of claim 7, further comprising:  
2 buffering the second compressed video stream prior to the inserting.

1 9. The method of claim 1, wherein the second video relates to an  
2 advertisement and the first compressed video stream relates to a program video.

1 10. The method of claim 1, wherein the profile for the first compressed  
2 video stream includes bit rate information related to the first compressed video stream.

1 11. The method of claim 10, wherein the bit rate information includes a  
2 high bit rate, a low bit rate, and a mean bit rate determined over a particular time period.

1 12. The method of claim 10, wherein the profile for the first compressed  
2 video stream further includes video buffering verifier (V BV) buffer information used for  
3 the encoding.

1 13. The method of claim 1, wherein the second video is encoded in  
2 accordance with an MPEG encoding scheme.

1 14. A system operative to insert a second compressed video stream into a  
2 first compressed video stream, comprising:

3 a profiler configured to receive the first compressed video stream and  
4 provide a profile for the first compressed video stream;

5 a real time encoder coupled to the profiler and configured to receive and  
6 encode a second video in accordance with a particular encoding scheme and further with  
7 a profile similar to the profile of the first compressed video stream to generate the second  
8 compressed video stream, and wherein the real time encoder is further configured to  
9 control the encoding of the second video based at least in part on the profile of the first  
10 compressed video stream; and

11 a multiplexer operatively coupled to the real time encoder and operative to  
12 receive the second and first compressed video streams and to insert the second  
13 compressed video stream into the first compressed video stream.

1 15. The system of claim 14, further comprising:

2 a buffer coupled to the real time encoder and the multiplexer and  
3 configured to receive and buffer the first compressed video stream from the real time  
4 encoder.

1 16. The system of claim 14, wherein the multiplexer is further configured  
2 to splice the second compressed video stream into the first compressed video stream.

1 17. The system of claim 14, wherein the profiler is further configured to  
2 receive the second compressed video stream and provide a profile for the second  
3 compressed video stream.

1 18. The system of claim 14, wherein the profile for the second  
2 compressed video stream includes bit rate information related to the second compressed  
3 video stream.

1 19. The system of claim 14, wherein the real time encoder is further  
2 configured to control the encoding of the second video such that a profile for the second  
3 compressed video stream is similar to the profile for the first compressed video stream at  
4 approximately a point in time when the second compressed video stream is inserted into  
5 the first compressed video stream.

